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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,842	10/02/2003	Robert Elliott Robotham	1400.1375-460	9518
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EXAMINER				
FAROUL, FARAH				
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2616				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/677,842

**Applicant(s)**

ROBOTHAM, ROBERT ELLIOTT

**Examiner**

FARAH FAROUL

**Art Unit**

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date 02/01/2008  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 1, 2008 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

***Claim Objections***

3. Claims 7 and 11 are objected to because of the following informalities:

The phrase "so as" in line 2 of claims 7 and 11 are to be deleted to render the claims positive.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, and 6-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kloth et al. (US 2004/0081108 A1).

For claims 1, Kloth discloses sending, to the switch fabric by a first line card of the line cards, a first request for transmitting a first unit of traffic of a first priority to the switch fabric, the first request indicating a first output port for which the first unit of traffic is destined (paragraph 75, lines 2-7 and 16-22 where a first line cards sends a first request associated with an output port, and the first request indicates an order to process the traffic)

using, by the first line card, a first grant received from the switch fabric permitting transmission of the first unit of traffic to the switch fabric (paragraph 79, lines 7-16 wherein a first grant is issued to the first request corresponding to the first line card) and issued in response to a second request for a second unit of traffic having a second priority lower than the first priority and being destined to the first output port, for scheduling transmission of the first unit of traffic to the switch fabric (paragraph 75, lines 7-11 wherein a second request of a lower priority order is sent the first output port).

For claim 2, Kloth discloses using a second grant issued in response to the first request for scheduling transmission of the second unit of the traffic to the switch fabric (paragraph 75, lines 7-11 wherein grants are issued to their corresponding requests).

For claim 3, Kloth discloses the first priority and the second priority are selected from a plurality of priorities corresponding to a respective plurality of service classes (paragraph 53, lines 5-10 wherein the packets are prioritized based on a plurality of priority levels corresponding to Quality of Service).

For claim 4, Kloth discloses the first line card sending the first request after the second request (paragraph 83, lines 8-11 wherein the requests may be reordered)

For claims 6 and 10, Kloth discloses a first line card of the plurality of line cards, the first line card configured to send requests for transmitting units of the traffic of specified priorities to the switch fabric (paragraph 75, lines 2-7 and 16-22 where a first line cards sends a first request associated with an output port, and the first request indicates an order to process the traffic) and to receive grants permitting transmission of the units of the traffic to switch fabric (paragraph 75, lines 7-11 wherein grants are

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issued to their corresponding requests), the first line card further configured to utilize a first grant of the grants corresponding to a first request of the requests, wherein the first request is of a lower priority than a second request of the requests, for transmitting a first unit of the traffic corresponding to the second request to the switch fabric (paragraph 83, lines 8-11 wherein the requests with their corresponding priorities may be reordered).

For claims 7 and 11, Kloth discloses the first line card utilizing the first grant for transmitting the first unit of the traffic to conform to a latency criterion pertaining to a first data stream comprising the first unit of the traffic (paragraph 81, lines 4-7 and paragraph 82 wherein the first line card sends the first grant to minimize delay and maximize system throughput).

For claims 8 and 12, Kloth discloses the first line card utilizing a second grant of the grants corresponding to the second request for transmitting a second unit of traffic corresponding to the first request to the switch fabric (paragraph 80, lines 10-15).

For claims 9 and 13, Kloth discloses the first line card issuing the first request prior to the second request (paragraph 79, lines 7-16 wherein the grants may be issued in any order).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kloth et al. (US 2004/0081108 A1) in view of Angle et al. (US 6,771,596 B1).

For claim 5, Kloth discloses the entire claimed invention except for the first line card sends a first set of requests of a highest priority of a plurality of priorities, with the first set of requests corresponding to a first quantity of the traffic in an amount of guaranteed traffic flow serviced by the first line card, and sends a second set of requests of a lower priority of the priorities for a second quantity of the traffic

Angle, from the same or similar field of endeavor, teaches sending a plurality of requests with different priority levels, wherein the requests with the highest priority are first presented followed by the requests with lower priority (column 16, lines 10-20).

Thus, it would have been obvious to one of ordinary skill in the art to combine the packet scheduling method of Angle is implemented into the communication network of Kloth at the time of the invention. The scheduling method of Angle is implemented into the communication network of Kloth sending the highest priority requests prior to the

lower priority requests. The motivation to combine the scheduling method of Angle with the communication network of Kloth is to reduce the latency in the network.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kloth et al. (US 2004/0081108 A1) in view of Kawai et al. (US 7,058,751 B2).

For claim 14, Kloth discloses the entire claimed invention except for performing grant substitution.

Kawai, from the same or similar field of endeavor, teaches scheduling packets of highest priority level with lowest priority and scheduling packets of lowest priority level with highest priority (column 9, lines 22-31).

Thus, it would have been obvious to one of ordinary skill in the art to combine the packet scheduling method of Kawai with the communication network of Kloth at the time of the invention. The scheduling method of Kawai is implemented into the communication network of Kloth by granting the traffic requests with highest priority with low priority level and vice versa. The motivation to combine the scheduling method of Kawai with the communication network of Kloth is to reduce delay in the network.

### ***Conclusion***

7. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as



well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARAH FAROUL whose telephone number is (571)270-1421. The examiner can normally be reached on Monday - Friday 6:30 AM - 4 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Farah Faroul/  
Examiner, Art Unit 2616

/Melvin Marcelo/  
Primary Examiner, Art Unit 2616